

INTERNATIONAL SEARCH REPORT

WO 03/055906

International Application No

PCT/EP 02PCT/EP02/14749

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/335 C12N15/31 C12N15/74 A61K38/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 33386 A (THOMPSON STUART A ;BLASER MARTIN J (US); DWORKIN JOEL (US); UNIV V) 6 August 1998 (1998-08-06)	1,3,5,7, 10-13, 15,16, 21,23, 25,26 2-4,6
Y	page 2, line 20 -page 5, line 17 page 9, line 25 -page 11, line 2; examples 9,17,19-23 --- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

12 June 2003

Date of mailing of the international search report

25/06/2003

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MARTINEZ BEATRIZ ET AL: "Expression of cbsA encoding the collagen-binding S-protein of Lactobacillus crispatus JCM5810 in Lactobacillus casei ATCC 393T." JOURNAL OF BACTERIOLOGY, vol. 182, no. 23, December 2000 (2000-12), pages 6857-6861, XP002209188 ISSN: 0021-9193 cited in the application	21,23
Y	the whole document	2-4,6
Y	--- SMIT EGBERT ET AL: "The S-layer protein of Lactobacillus acidophilus ATCC 4356: Identification and characterisation of domains responsible for S-protein assembly and cell wall binding." JOURNAL OF MOLECULAR BIOLOGY, vol. 305, no. 2, 2001, pages 245-257, XP002209189 ISSN: 0022-2836 cited in the application abstract page 246, right-hand column, last paragraph page 249, right-hand column, paragraph 4 -page 253, right-hand column, paragraph 2	2-4,6
X	--- SLEYTR U B ET AL: "BACTERIAL AND ARCHAEAL S-LAYER PROTEINS: STRUCTURE-FUNCTION RELATIONSHIPS AND THEIR BIOTECHNOLOGICAL APPLICATIONS" TRENDS IN BIOTECHNOLOGY, ELSEVIER PUBLICATIONS, CAMBRIDGE, GB, vol. 15, no. 1 156, 1997, pages 20-26, XP004016808 ISSN: 0167-7799 page 23, Box 1	3,6, 27-31
A	--- JAHN-SCHMID BEATRICE ET AL: "Immunoreactivity of allergen (Bet v 1) conjugated to crystalline bacterial cell surface layers (S-layers)." IMMUNOTECHNOLOGY (AMSTERDAM), vol. 2, no. 2, 1996, pages 103-113, XP004052675 ISSN: 1380-2933 the whole document	1,25,26
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>MAASSEN C B M ET AL: "Instruments for oral disease-intervention strategies: Recombinant Lactobacillus casei expressing tetanus toxin fragment C for vaccination or myelin proteins for oral tolerance induction in multiple sclerosis." VACCINE, vol. 17, no. 17, 23 April 1999 (1999-04-23), pages 2117-2128, XP004164996 ISSN: 0264-410X cited in the application the whole document -----</p>	25,26

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Information on patent family members

International Application No

PCT/EP 02/PCT/EP02/14749

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9833386 A	06-08-1998	AU WO 6050398 A 9833386 A1	25-08-1998 06-08-1998

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